APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,601	07/30/2003	Lance Jeffrey Gay	NG(MS)-6671	8687

26294   7590   10/19/2007
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ART UNIT	PAPER NUMBER
2152	

MAIL DATE	DELIVERY MODE
10/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/630,601	GAY ET AL.
	Examiner	Art Unit	
	Dohm Chankong	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _13 August 2007_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is

closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-12,14-20 and 22-27_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-12, 14-20, and 22-27_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage

      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   Paper No(s)/Mail Date. _____.
3)☐ Information Disclosure Statement(s) (PTO/SB/08)   5)☐ Notice of Informal Patent Application
   Paper No(s)/Mail Date _____.   6)☐ Other: _____.

DETAILED ACTION

1>   This action is in response to Applicant's amendment, filed 8.13.2007. Claims 1, 7, 10, 14,

22, and 25 are amended. Claims 13 and 21 are canceled. Claims 1-12, 14-20, and 22-27 are

presented for further examination.

2>   This is a final rejection necessitated by Applicant's amendment of all independent

claims that affect the scope of the claimed invention.

Response to Arguments

3>   Applicant's arguments with respect to claims 1-12, 14-20, and 22-27 have been

considered but are moot in view of the new ground(s) of rejection.

4>   With respect to claim 5, Applicant argues that Payne does not disclose providing

email notification of the status of transmission of blocks over a plurality of TCP

connections. Specifically, Applicant argues that Payne "provides no teaching or suggestion

that any e-mail provided would include a status of transmission." However, contrary

Applicant's argument, Payne does disclose the claimed limitation.

     Payne is directed in part to providing a user notification that there is an incoming

message [column 2 «lines 58-60»]. The message is delivered as packets over multiple

connections to the client which reassembles the packets to form the message [Figure 17,

Figure 25]. Once received, the user receives an alert, such as email, that the transfer of

packets is complete [column 5 «lines 48-51»]. Thus, the user receives an email alert of the

status of the transmission – here, the status is that the transmission is completed. Payne's

email alert that a transmission of packets have been assembled and has arrived at the user

reads on claim 5's extremely broad language of "the status of transmission of the blocks."

5>   With respect to claim 12, the previous rejection had relied upon the Horn patent

publication. Since the previous Office action, the Horn application has been issued as a

patent. Therefore, the rejection of claim 12 is merely updated in this action to refer to the

Horn patent, rather then its publication. No substantive change to the rejection of claim 12

has been made.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6>   Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. Claim 7 lacks proper antecedent basis : "the available bandwidth."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a

person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7>   Claims 1-4, 12, 14-17, and 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lassen et al, U.S Patent No. 7.072.971 ["Lassen"], in view of Kurosawa et al, U.S Patent Publication No. 2004|0049367 ["Kurosawa"] in further view of Horn et al, U.S Patent No. 7.240.358 ["Horn"].

8>   As to claim 1, Lassen discloses a client system [Figure 3 «item 102» where : Lassen's server is analogous to Applicant's claimed client system. The term "client system" does not prohibit the interpretation set forth with respect to Lassen's server because Lassen's server has the same functionality as claimed for the client system], comprising:

a file partitioner that divides a file into a plurality of blocks [Figure 3 «item 220» | column 10 «lines 4-12»];

a client control application operative to initiate a plurality of logical connections [Figure 3 «item 230» | column 8 «lines 34-40»] and to assign each of the plurality of blocks to one of the connections of the plurality of connections, such that each block is transmitted via its assigned connection [column 6 «lines 31-40» where : Lassen discloses transmitting different blocks over different channels. | column 10 «lines 4-12»].

Lassen does not expressly disclose that the client control application provides data that includes an indication of the quantity of the plurality of TCP connections. However, it should be noted that Lassen does disclose a client application can provide a "file description [that] may include...the set of channels available to download the file." Furthermore, Horn

expressly discloses that a client application provides data that includes an indication of the

quantity of the plurality of TCP connections [column 18 «lines 40-45» : rules that specify

"the number of channels to join"].

It would have been obvious to one of ordinary skill in the art to modify Lassen's

teaching of providing a "set of channels" with Horn's further teaching that an application

provides an indication of the quantity of TCP connections. The modification would enhance

Lassen's system by providing rules as to the number of channels that a client can join in

order to properly download a set of blocks from a server.

Lassen also does not expressly disclose that the logical connections are TCP

connections. In the same field of invention, Kurosawa is directed towards a communication

system whereby a file is divided into a plurality of blocks and transmitted over a multiple

channels [0276]. Kurosawa discloses logical channels implemented with TCP [0018]. Thus it

would have been obvious to one of ordinary skill in the art to have reasonably inferred from

Kurosawa's teaching that Lassen's logical channels are TCP connections. Further, TCP

connections are well known in the art especially in establishing client-server

communications.

9>   As to claim 2, Lassen discloses the plurality of blocks being transmitted to a server

system [Figure 3 «item 104» where : Lassen's client corresponds to a server system. The term

"server system" does not prohibit interpreting Lassen's client computer as a server system

since Lassen's client has the same functionality as claimed for a server system], the server

system comprising:

a server control application operative to monitor the plurality of TCP connections and to receive the plurality of blocks via the plurality of TCP connections, each block having an associated ordinal identifier [Figure 3 «item 250» | column 5 «lines 54-67» where : Lassen's blocks are "sequentially numbered" | see rejection of claim 1 with respect to TCP connections – Kurosawa];

a buffer that stores the received blocks [Figure 3 «item 255»];

a concatenation control that retrieves a received block from the buffer and concatenates the received block into a file once blocks having an ordinal identifier prior to the received block have been received [Figure 3 «items 260, 270, 280» | column 11 «lines 56-64» | column 17 «lines 15-24»].

10>   As to claim 3, Lassen discloses a buffer that stores the plurality of blocks for subsequent transmission [column 10 «lines 36-40» | column 15 «lines 1-7»].

11>   As to claim 4, Lassen discloses the plurality of blocks being assigned to the plurality of TCP connections (see rejection of claim 1 – Kurosawa) in a predetermined order [column 15 «lines 30-43» | column 25 «lines 2-17»].

12>   As to claim 13, as it does not teach or further define over previously claimed limitations, it is similarly rejected for at least the same reasons set forth for claim 1.

13>   As to claims 14 and 15, as they do not teach or further define over previously claimed

limitations, they are similarly rejected for at least the same reasons set forth for claims 1 and

2.

14>   As to claim 16, Lassen discloses the server control application being operative to

extract control data from at least one of the received blocks [column 17 «lines 15-61» where :

Lassen's keys and block index are analogous to control data].

15>   As to claim 17, Lassen discloses concatenation control is operative to monitor the

buffer for blocks consecutive and subsequent to a received block [column 5 «lines 54-55» |

column 18 «lines 60-67»].

16>   As to claim 22, Lassen discloses a method of transferring a file over a network

comprising:

        dividing a source file into a plurality of blocks at a first entity [column 5 «lines 54-55»

| column 10 «lines 4-12»];

        establishing a plurality of data connections between the first entity and a second

entity [column 9 «lines 56-62» where : Lassen's channels correspond to data connections];

        assigning a block from the plurality of blocks to a respective data connection of the

plurality of data connections [column 6 «lines 31-40» where : Lassen discloses transmitting

different blocks over different channels. | column 10 «lines 4-12»]; and

transmitting the plurality of blocks from the first entity to the second entity, each block being transmitted over its assigned data connection [column 10 «lines 4-12 and lines 53-54» | column 25 «lines 2-17»].

Lassen does disclose that the channels may be either physical or logical channels [column 8 «lines 34-40»]. Kurosawa discloses logical channels implemented with TCP [0014]. Thus it would have been obvious to one of ordinary skill in the art to have reasonably inferred from Kurosawa's teaching that Lassen's logical channels are TCP connections. Further, TCP connections are well known in the art especially in establishing client-server communications.

Lassen does not expressly disclose providing configuration data from the first to the second entity that identifies a total number of data connections to be established. But refer to the rejection of claim 1 relying on Horn to teach this limitation.

17>   As to claim 23, Lassen discloses:

concatenating the plurality of blocks, including a first block, into a destination file during the transmission of at least one other block [column 11 «lines 56-64» where : Lassen's reassembly of the blocks is analogous to concatenating the blocks];

concatenating a block received at the second entity when all blocks having an ordinal identifier prior to the received block have been concatenated into the file [column 14 «lines 6-15» | column 18 «lines 65-67» where : the assembler uses identifiers to sort the blocks and assemble the complete file in the correct order]; and

buffering a block received at the second entity when at least one block having an

ordinal identifier prior to the received block has not been concatenated into the file [column

11 «lines 56-64» | column 17 «lines 15-24»].

18>   As to claim 24, Lassen does not expressly disclose utilizing transmission control

protocol (TCP) to transmit the assigned blocks. Lassen does disclose that the channels may

be either physical or logical channels [column 8 «lines 34-40»]. Kurosawa discloses logical

channels implemented with TCP [0014]. Thus it would have been obvious to one of ordinary

skill in the art to have reasonably inferred from Kurosawa's teaching that Lassen's logical

channels are TCP connections. Further, TCP connections are well known in the art

especially in establishing client-server communications.

19>   As to claims 25 and 26, as they do not teach or further define over previously claimed

limitations, they are similarly rejected for at least the same reasons set forth for claims 23 and

24.

20>   As to claim 27, as it does not teach or further define over previously claimed

limitations, it is similarly rejected for at least the same reasons set forth for claim 24.

21>   Claim 5 is rejected under 35 U.S.C §103(a) as being unpatentable over Lassen,

Kurosawa and Horn, in further view of Payne et al, U.S Patent No. 6.021.433 ["Payne"].

22>   As to claim 5, Lassen as modified by Kurosawa and Horn does not expressly disclose providing email notification of the status of the transmission of blocks over the plurality of TCP connections to at least one remote location.

23>   In the same field of invention, Payne is directed towards a method of data transmission including partitioning a data file into a plurality of packets [Figure 17]. Payne discloses providing email notification of the status of the transmission of these packets over the connections to at least one remote location [Figure 13 | column 29 «line 65» to column 30 «line 33»]. Providing email alerts as claimed is well known in the art.

It would have been obvious to one of ordinary skill in the art to incorporate email notification functionality into Lassen's data transmission system. One would have been motivated to provide such a modification to enhance the functionality of Lassen's system to allow users to be alerted to the status of data transmissions.

24>   Claim 6 is rejected under 35 U.S.C §103(a) as being unpatentable over Lassen, Kurosawa and Horn, in further view of Clark et al, U.S Patent No. 6.073.163 ["Clark"].

25>   As to claim 6, Lassen as modified by Kurosawa and Horn does not expressly disclose automatically reinitiating a TCP connection if a TCP connection is prematurely terminated.

26>   In the same field of invention, Clark discloses automatically reinitiating a TCP connection if a TCP connection is prematurely terminated [column 11 «lines 51-62» : client

re-establishing a connection]. It would have been obvious to one of ordinary skill in the art

to incorporate Clark's teachings into Lassen's data transmission over channels system.

Lassen's system would be improved by enabling a layer of fault tolerance - data

transmissions can be resumed when certain channels fail.

27> Claim 7 is rejected under 35 U.S.C §103(a) as being unpatentable over Lassen,

Kurosawa and Horn, in further view of Hu et al, U.S Patent Publication No. 2003|0214906

["Hu"].

28> As to claim 7, Lassen as modified by Kurosawa and Horn does not expressly disclose

detecting a lagging connection, and if a lagging connection is detected, the client control

application pauses at least one of the plurality of TCP connections to allow the lagging

connection access to the available bandwidth.

Hu discloses a system for transferring objects between a client and a server by

establishing multiple connections between them [0011]. Hu discloses detecting a lagging

connection, and if a lagging connection is detected, the client control operation pauses at least

one of the plurality of TCP connections to allow the lagging connection access to the

available bandwidth [0029, 0031 : suspending or holding up a particular flow when detecting

congestion in other flows allows "other flows to continue"]. Hu's flows are similar to

Lassen's channels.

It would have been obvious to one of ordinary skill in the art to have modified Lassen

to include Hu's teachings for suspending particular flows and allowing other flows to

continue. Hu teaches that such "selective control" over the flows prevents the network from becoming overloaded [0031]. For this reason, one of ordinary skill would have been motivated to modify Lassen with Hu's teaching.

29>   Claims 8-12 and 18-20 are rejected under 35 U.S.C §103(a) as being unpatentable over Lassen, Kurosawa and Horn, in further view of Dougall et al, U.S Patent Publication No. 2003|0093485 ["Dougall"].

30>   As to claim 8, Lassen as modified by Kurosawa and Horn does not expressly disclose a GUI that provides status information to a user. In the same field of invention, Dougall is directed towards data transmission over a plurality of channels whereby a client can receive information over the plurality of channels [abstract]. Dougall discloses providing a graphical user interface that provides status information to a user [Figures 6 and 7]. GUIs such as the one claimed by application are rather ubiquitous and extremely well known in the art.

It would have been obvious to one of ordinary skill in the art to incorporate a GUI such as the one taught by Dougall into Lassen's data transmission system. One would have been motivated to combine the references to enhance the functionality of Lassen's system by providing status information to a user about a particular channel such as the maximum bandwidth of the channel and other such information [see Dougall, 0093].

31>   As to claim 9, Lassen as modified by Kurosawa and Horn and Dougall do not expressly disclose an "Abort" button that ends transmission of the plurality of blocks.

However, Lassen does disclose that a user can stop serving files [column 7 «lines 11-13»]. This teaching implies that the user has some means to end transmission of the plurality of blocks. Combined with Dougall's teaching of a GUI, it would have been obvious for one of ordinary skill in the art to have reasonably inferred the use of an interface to stop serving files.

32>   As to claim 10, Lassen as modified by Kurosawa and Horn does not expressly disclose a configuration routine that allows a user to specify a bandwidth to be used in a connection to transmit the file but does disclose that the user can change the rate of one or more of the files being currently served [column 7 «lines 11-14»]. This teaching implies that the user has some means to specify the bandwidth at which the files are served. Combined with Dougall's express teaching of specifying a bandwidth to transmit the file [Figure 4 : "maximum bandwidth" of the channel], it would have been obvious for one of ordinary skill in the art to have reasonably inferred the use of an interface to specify the bandwidth of a particular channel.

33>   As to claim 11, Lassen as modified by Kurosawa and Horn does not expressly status information. Dougall expressly discloses that status information comprising at least one: a bandwidth value associated with the transmission [Figure 16 | 0115]. Providing status information of a downloaded file is extremely well known and ubiquitous in the art. It would have been obvious to one of ordinary skill in the art to incorporate a GUI that provided downloading status of a channel into Lassen's system. One would have been motivated to

provide such a modification to allow a user to monitor the bandwidth of the channel [see

Dougall, 0115].

34>   As to claim 12, Lassen as modified by Kurosawa does not expressly disclose a

configuration routine allowing a user to specify at least one of an averaging period used for

deriving the estimated duration for the transmission and a number of TCP connections

utilized in the transfer.

In the same field of invention, Horn is directed towards the same data transfer

system as taught by Lassen [Horn, Figure 2]. Horn discloses allowing a user to specify the

number of TCP logical connections (channels) utilized in a transfer [column 18 «lines 40-54»

where : Horn discloses that a user can specify the number of channels to join to "increase its

reception rate"]. An interface is implied because some means is necessary to allow a user to

specify whether or not to join multiple channels.

Combined with Dougall's express teaching of a GUI, it would have been obvious to

one of ordinary skill in the art to modify Lassen with Horn's teaching to provide a routine

that allows a user to specify a number of TCP connections. One would have been motivated

to provide such a modification to enhance the functionality of Lassen's system by providing

a user the ability to increase its download rate.

35>   As to claims 18-20, as they do not teach or further define over define over previously

claimed limitations, they are similarly rejected for at least the same reasons set forth for

claims 8, 9, and 11. Additionally, Dougall teaches the limitation of a manipulatable display
[Figure 16 «item 706»].

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this
Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).
Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE
MONTHS** from the mailing date of this action. In the event a first reply is filed within
TWO MONTHS of the mailing date of this final action and the advisory action is not
mailed until after the end of the **THREE-MONTH** shortened statutory period, then the
shortened statutory period will expire on the date the advisory action is mailed, and any
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the
advisory action. In no event, however, will the statutory period for reply expire later than
SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Dohm Chankong whose telephone number is 571.272.3942.
The examiner can normally be reached on Monday-Friday [8:30 AM to 4:30 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Bunjob Jaroenchonwanit can be reached on 571.272.3913. The fax phone number
for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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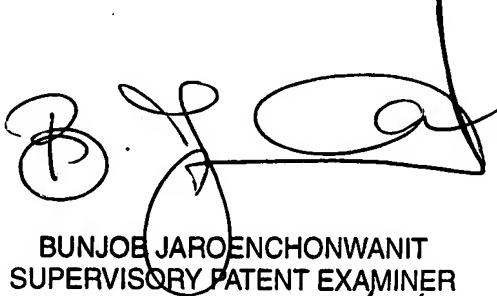
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